Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy

**R-1 ITEM NOMENCLATURE** 

1319: Research, Development, Test & Evaluation, Navy

PE 0604270N: Electronic Warfare (EW) Dev

BA 5: Development & Demonstration (SDD)

APPROPRIATION/BUDGET ACTIVITY

| COST (\$ in Millions)                    | FY 2011 | FY 2012 | FY 2013<br>Base | FY 2013<br>OCO | FY 2013<br>Total | FY 2014 | FY 2015 | FY 2016 | FY 2017 | Cost To<br>Complete | Total Cost |
|--|---------|---------|-----------------|----------------|------------------|---------|---------|---------|---------|---------------------|------------|
| Total Program Element                    | 78.147  | 95.018  | 51.304          | -              | 51.304           | 35.988  | 35.729  | 24.505  | 25.048  | Continuing          | Continuing |
| 0556: EW Counter Response                | 24.075  | 20.222  | 19.728          | -              | 19.728           | 19.931  | 20.280  | 20.252  | 20.632  | Continuing          | Continuing |
| 1742: EW Technical Development and T&E   | 4.719   | 1.784   | 1.702           | -              | 1.702            | 1.649   | 1.552   | 1.542   | 1.568   | Continuing          | Continuing |
| 2175: Tactical Air Electronic<br>Warfare | 49.353  | 62.100  | 29.874          | -              | 29.874           | 14.408  | 13.897  | 2.711   | 2.848   | Continuing          | Continuing |
| 3327: MAGTF EW Aviation<br>Development   | -       | 10.912  | -               | -              | -                | -       | -       | -       | -       | 0.000               | 10.912     |

#### A. Mission Description and Budget Item Justification

This program element includes development of Electronic Warfare (EW) systems for the United States Navy (USN), United States Marine Corps (USMC), and United States Army tactical aircraft, USMC helicopters, surface combatants, data link vulnerability assessments, precision targeting, USN and USMC radio frequency jammers, and development and testing of electronic warfare devices for emerging threats and emergency contingencies.

| B. Program Change Summary (\$ in Millions)            | FY 2011 | FY 2012 | <b>FY 2013 Base</b> | FY 2013 OCO | FY 2013 Total |
|---|---------|---------|---------------------|-------------|---------------|
| Previous President's Budget                           | 80.819  | 89.418  | 52.963              | -           | 52.963        |
| Current President's Budget                            | 78.147  | 95.018  | 51.304              | -           | 51.304        |
| Total Adjustments                                     | -2.672  | 5.600   | -1.659              | -           | -1.659        |
| <ul> <li>Congressional General Reductions</li> </ul>  | -       | -       |                     |             |               |
| <ul> <li>Congressional Directed Reductions</li> </ul> | -       | -       |                     |             |               |
| <ul> <li>Congressional Rescissions</li> </ul>         | -       | -       |                     |             |               |
| <ul> <li>Congressional Adds</li> </ul>                | -       | -       |                     |             |               |
| <ul> <li>Congressional Directed Transfers</li> </ul>  | -       | -       |                     |             |               |
| Reprogrammings  | -0.400  | -       |                     |             |               |
| SBIR/STTR Transfer                                    | -1.861  | -       |                     |             |               |
| Program Adjustments                                   | -       | 5.600   | -1.688              | -           | -1.688        |
| Rate/Misc Adjustments                                 | -       | -       | 0.029               | -           | 0.029         |
| Congressional General Reductions                      | -0.411  | -       | -                   | -           | -             |
| Adjustments   |         |         |                     |             |               |

# **Change Summary Explanation**

Technical:

PE 0604270N: Electronic Warfare (EW) Dev

**UNCLASSIFIED** Page 1 of 38

R-1 Line #101

**DATE:** February 2012

Navy

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604270N: Electronic Warfare (EW) Dev

Project Unit 0556 / EW COUNTER RESPONSE: Not Applicable

Project Unit 1742 / EW TECHNICAL DEVELOPMENT & T&E: Not Applicable

Project Unit 2175 / TACTICAL AIR ELECTRONIC WARFARE (EW): Not Applicable

Project Unit 3327 / Marine Air Ground Task Force (MAGTF) EW AVIATION DEVELOPMENT: FY13 and future funding moved to new PE 0604376M PU 3327. Schedule:

Project Unit 0556 / EW COUNTER RESPONSE: Problems encountered during Improved Capability III Block 5 Developmental Testing delayed completion until 4th QTR 2012 delaying subsequent Block Developments.

Project Unit 1742 / EW TECHNICAL DEVELOPMENT & T&E: Not Applicable

Project E2175 / TACTICAL AIR EW: Integrated Defensive Electronic Countermeasure Block 2 (IB-2): Not Applicable. IDECM Block 3 (IB-3): The IB-3 Full Rate Production (FRP) 2 contract award has been changed to reflect the revised date of 3rd Qtr FY 2012.

IDECM Block 4 (IB-4): The IB-4 In-Process Review 3 has been changed to 2nd Qtr FY 2012. The IB-4 FRP 9 quantities have been changed from 19 to 7 due to FY 2012 APN-5 budget mark. ALQ-214 Software Improvement: The ALQ-214 Software Improvement contract award and the start of development have been changed to 2nd Qtr FY 2012.

Project Unit 3327 / MAGTF EW AVIATION DEVELOPMENT: Not Applicable.

PE 0604270N: Electronic Warfare (EW) Dev

| Exhibit R-2A, RD1&E Project Jus  |         | DAIE: Feb | ruary 2012      |                |                            |         |         |                                      |         |                     |            |
|--|---------|-----------|-----------------|----------------|----------------------------|---------|---------|--------------------------------------|---------|---------------------|------------|
| APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD) |         |           |                 |                | IOMENCLAT<br>ON: Electroni | _       |         | PROJECT<br>0556: EW Counter Response |         |                     |            |
| COST (\$ in Millions)  | FY 2011 | FY 2012   | FY 2013<br>Base | FY 2013<br>OCO | FY 2013<br>Total           | FY 2014 | FY 2015 | FY 2016                              | FY 2017 | Cost To<br>Complete | Total Cost |
| 0556: EW Counter Response  | 24.075  | 20.222    | 19.728          | -              | 19.728                     | 19.931  | 20.280  | 20.252                               | 20.632  | Continuing          | Continuing |
| Quantity of RDT&E Articles   | 0       | 0         | 0               | 0              | 0                          | 0       | 0       | 0                                    | 0       |                     |            |

#### A. Mission Description and Budget Item Justification

Fishibit D.OA. DDTOF Businet Justification, DD 0040 Nove

This project develops upgrades to combat the increasingly complex and dense Electronic Warfare (EW) threat environment. Required improvements in Airborne Electronic Attack (AEA) will achieve application of state-of-the-art signal exploitation, processing, display techniques, improved tactics, and jamming capabilities against EW threats.

Efforts include continued development of Force Protection/Overseas Contingency Operations (classified discussion available upon request) Navigation and Information Operations applications and enhanced communications jamming. The efforts under this project provide for electronic countermeasure responses to advanced threat weapon systems and C3 networks that are expanding in density and technical complexity. This project funds the continued development and integration of all EW and Electronic Attack systems for the US Navy electronic attack aircraft including improvements within precision Direction of Arrival, geo-location, Specific Emitter Identification, Auto-Electronic Support Measures, and selective reactive jamming.

The EA-6B Improved Capability (ICAP) III test aircraft will continue to serve as a test platform during government test and evaluation of Multi Functional Information Distribution Systems/Link-16, Low Band Transmitter, and other EW improvements. A requirement exists to allow the EA-6B ICAP III to participate in various coordinated targeting scenarios such as Network Centric Warfare, Force Net, Improved Suppression of Enemy Air Defenses/Destruction of Enemy Air Defenses, and other strategic and theatre-based DOD networks and strategies. Likewise, the ICAP III system shall be matured to enable the fusion and correlation of both organic and non-organic threat information to improve present sensor and targeting information to the theatre commander via coordinated efforts between other airborne, ground and ship-based operations. A method of implementing this requirement is to include the EA-6B on the Link-16 EW Network. Incorporation of the Link-16 message set into the EA-6B and participation of the ICAP III within the Network Centric Warfare arena improves the Strike Group Commander's situational awareness. All efforts and system upgrades include the conversion of and transition from the Tactical EA-6B Mission Planning System to the Joint Mission Planning System, including development of EA-6B Unique Planning Modules.

Electronic Attack Jammer Techniques Optimization (JATO) and test support is required to address and counter new and evolving radar and communications threats in support of existing and emerging systems such as the EA-6B, EA-18G, and NGJ. JATO will continue to generate techniques, tactics, and procedures that will optimize the capabilities of existing weapon systems, and to assist in requirements definitions of emerging AEA systems.

The Airborne Electronic Attack Expendable provides an expanded war fighting capability, on an expendable host platform against EW threats including; Integrated Air Defenses, Command and Control Communications, and Datalinks through an open Electronic Attack Subsystem interface specification. This flexible system allows rapid technology insertion and threat set adaptability that will address AEA capability and sufficiency gaps.

PE 0604270N: Electronic Warfare (EW) Dev

UNCLASSIFIED
Page 3 of 38

R-1 Line #101

DATE: Fabruson, 2042

|  | UNCLASSIFIED  |                  |            |             |            |
|--|---|------------------|------------|-------------|------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy  |   |                  | DATE: Fel  | oruary 2012 |            |
| APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)   | T<br>/ Counter Res                                      | Counter Response |            |             |            |
| B. Accomplishments/Planned Programs (\$ in Millions, Article   | e Quantities in Each)                                   |                  | FY 2011    | FY 2012     | FY 2013    |
| Title: ICAP III UPDATE   |   | Articles:        | 6.472<br>0 | 5.281<br>0  | 4.459<br>0 |
| FY 2011 Accomplishments: Continued the integration and enhancement of Link-16 and ALQ-as well as resolving any Operational Evaluation (OPEVAL)/Verific (FOT&E) related deficiencies. Efforts focused on fielding the important planning and development of ICAP III Block 6. | cation of Correction of Follow-on Operational Test & Ev | aluation         |            |             |            |
| FY 2012 Plans: Continue development, integration, and enhancement of Link-16 resolving OPEVAL and FOT&E related deficiencies via ICAP III E  |   | as               |            |             |            |
| FY 2013 Plans: Continue development, integration, and enhancement of Link-16 resolving OPEVAL and FOT&E related deficiencies via ICAP III E  |   | as               |            |             |            |
| Title: MISSION PLANNING  |   | Articles:        | 3.989<br>0 | 3.220<br>0  | 2.350<br>0 |
| FY 2011 Accomplishments: Joint Mission Planning System (JMPS) and associated EA-6B Ur upgrades. Continued development of the JMPS components in d Environment framework continues development required to coun   | lirect support of the ICAP III system. Mission Planning | Block            |            |             |            |
| FY 2012 Plans: Continue development of all elements of the mission planning en Management System and Electronic Warfare Development System an upgrade operating framework and transition from a Windows counter Microsoft Operating System obsolescence.                     | em. Mission Planning Environment will continue develop  | oment of         |            |             |            |
| FY 2013 Plans: Continue development of all elements of the mission planning en Management System and Electronic Warfare Development System an upgrade operating framework and transition from a Windows counter Microsoft Operating System obsolescence.                     | em. Mission Planning Environment will continue develop  | oment of         |            |             |            |
| Title: LINK 16 MESSAGE SETS AND DATA LINKS   |   |                  | 1.041      | 0.953       | -          |

PE 0604270N: Electronic Warfare (EW) Dev

UNCLASSIFIED Page 4 of 38

R-1 Line #101

Navy

|  | UNCLASSII ILD  |                               |                    |             |             |
|--|--|-------------------------------|--------------------|-------------|-------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy  |  |                               | DATE: Feb          | oruary 2012 |             |
| APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)   | R-1 ITEM NOMENCLATURE PE 0604270N: Electronic Warfare (EW) Dev   | <b>PROJEC</b> 0556: <i>EV</i> | T<br>/ Counter Res | sponse      |             |
| B. Accomplishments/Planned Programs (\$ in Millions, Article   | Quantities in Each)  |                               | FY 2011            | FY 2012     | FY 2013     |
|  |  | Articles:                     | 0                  | 0           |             |
| FY 2011 Accomplishments:  Continued development and testing of the Link-16 modification. T Capability (ICAP) III continued participation within Force Net and fasituational awareness allowed by Network Centric Warfare efforts.  | acilitate the Electronic Attack (EA) contributions to the  |                               |                    |             |             |
| FY 2012 Plans: Continue development and testing of the Link-16 modification. Th III continued participation within Force Net and facilitate the EA co Network Centric Warfare efforts.   |  |                               |                    |             |             |
| *Beginning in FY13, LINK 16 Message Sets and Data Links will be MAGTF EW Aviation Development, as EA-6B Multifunctional Infor  |  | Init 3327,                    |                    |             |             |
| Title: JAMMER TECHNIQUES OPTIMIZATION (JATO)   |  | Articles:                     | 9.965<br>0         | 10.433<br>0 | 11.033<br>( |
| FY 2011 Accomplishments:  Performed engineering development and test support required to a communications threats in support of existing and emerging system (NGJ). JATO continued to generate techniques, tactics, and proce ALQ-227, ALQ-231, ALE-43 and Airborne Electronic Attack Expendered of emerging Airborne Electronic Attack (AEA) systems. JATO led and Force Protection issues. (Classified discussion available upon | ms such as the EA-6B, EA-18G and Next Generation edures to optimize the capabilities of ALQ-99, ALQ-218 adable (AEAE) systems, and assisted in requirements efforts in support of Overseas Contingency Operation | 3,<br>definitions             |                    |             |             |
| FY 2012 Plans: Continue engineering development and test support required to acradar and communications threats in support of existing and emergent continue to generate techniques, tactics, and procedures to optimi ALE-43 and AEAE systems, and to assist in requirements definition support of OCO and Force Protection issues. (Classified discussions)  | ging systems such as the EA-6B, EA-18G, and NGJ.<br>ize the capabilities of ALQ-99, ALQ-218, ALQ-227, AL<br>ons of emerging AEA systems. JATO continues to lead  | Q-231,                        |                    |             |             |
| FY 2013 Plans: Provide engineering development and test support required to add support of existing and emerging systems such as the EA-6B, EA-Optimization (JATO) will continue to generate techniques, tactics,  | 18G, and Next Generation Jammer. Jammer Techniq  | ues                           |                    |             |             |

PE 0604270N: Electronic Warfare (EW) Dev

Navy

Page 5 of 38 R-1 Line #101

|   | UNCLASSIFIED   |   |                    |             |            |
|---|--|---|--------------------|-------------|------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy   |  |   | DATE: Fel          | bruary 2012 |            |
| APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)  | R-1 ITEM NOMENCLATURE PE 0604270N: Electronic Warfare (EW) Dev   | <b>PROJEC</b> 0556: <i>EW</i>                           | T<br>/ Counter Res | sponse      |            |
| B. Accomplishments/Planned Programs (\$ in Millions, Article Qu   | antities in Each)  |   | FY 2011            | FY 2012     | FY 2013    |
| USQ-113, ALQ-218, ALQ-227, ALQ-231, ALE-43, and Airborne Electin requirements definitions of emerging Airborne Electronic Attack (Al Overseas Contingency Operation and Force Protection issues. (Class   | EA) systems. JATO continues to lead efforts in sup   |   |                    |             |            |
| Title: Intrepid Tiger II (ALQ-231)  |  | Articles:   | 0.436<br>0         | -           | -          |
| FY 2011 Accomplishments: The ALQ-231 program conducted combined Developmental Testing/risk reduction for a sustainable AEA solution.  | Operational Testing on Lot 1 deliveries. Conducted   | further   |                    |             |            |
| *Beginning in FY12, Intrepid Tiger II (ALQ-231) will be funded under lelectronic Warfare Aviation Development. Beginning in FY13, Intrepid 3327, MAGTF EW for Aviation.   |  |   |                    |             |            |
| Title: AEAE   |  | Articles:   | 2.172<br>0         | 0.335       | 1.886<br>0 |
| FY 2011 Accomplishments:  AEA payload/ITALD A-Kit and B-kit designs completed and payload of and effectiveness. Mission planning tools completed with Concept of Tactics and Procedures maturation. Engineering Change Proposals a publications ongoing. Engineering Development Model assets built to Engineering reviews conducted through the Flight Test Readiness Relevels of integration. Risk Reduction for a long term, sustainable AEA for F/A-18 E/F carriage of the AEA payload in an AEAE and other for operational capabilities. | Operations (CONOP) development supporting Tecand logistics support including Maintenance and Operations of Support ground and initial F-18 flight testing. Systeview. AEA Payload optimized for additional form for solution conducted to include analysis, prototype in the support of the support | chniques,<br>peration<br>tems<br>actors and<br>and test |                    |             |            |
| FY 2012 Plans: The AEAE project will continue risk reduction efforts including scope and data gathering on the ADM-160 Miniature Air Launched Decoy for improvements for the Electronic Attack System payload and threat efforts utilizing fleet operator inputs. Will conduct training, planning, supports the efforts of the Electronic Attack System payload and threat efforts utilizing fleet operator inputs.   | or F/A-18 E/F carriage. Threat analysis and capabil<br>fectiveness review will address Area of Regard defi   | lity  |                    |             |            |
| FY 2013 Plans:  Develop Instrumented Measurement Vehicles for carrier suitability an and shock forces associated with F/A-18EF carrier catapult take-offs   |  |   |                    |             |            |

PE 0604270N: Electronic Warfare (EW) Dev

Navy

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

1319: Research, Development, Test & Evaluation, Navy PE 0604270N: Electronic Warfare (EW) Dev 0556: EW Counter Response

BA 5: Development & Demonstration (SDD)

| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)  | FY 2011 | FY 2012 | FY 2013 |
|---|---------|---------|---------|
| models for wind tunnel simulation and test. Perform wind tunnel safe-separation and transition-to-flight tests for vehicle risk analysis and risk mitigation. Develop F/A-18EF Airborne Electronic Attack Expendable (AEAE) Unique Planning Component for |         |         |         |
| integration into the F/A-18EF Joint Mission Planning System Mission Planning Environment and H12 Software Configuration Set.  |         |         |         |
| Develop and evaluate Electronic Warfare payloads for integration into AEAE platform. Integrate standard payload interface into  |         |         |         |
| the vehicle baseline and develop documentation in support of the Joint Capabilities Integration and Development System process to include a Capabilities Development Document.  |         |         |         |
| Accomplishments/Planned Programs Subtotals  | 24.075  | 20.222  | 19.728  |

#### C. Other Program Funding Summary (\$ in Millions)

|                                 |         |         | FY 2013     | FY 2013    | FY 2013      |         |         |         |         | Cost To         |                   |
|---------------------------------|---------|---------|-------------|------------|--------------|---------|---------|---------|---------|-----------------|-------------------|
| <u>Line Item</u>                | FY 2011 | FY 2012 | <b>Base</b> | <u>000</u> | <u>Total</u> | FY 2014 | FY 2015 | FY 2016 | FY 2017 | <b>Complete</b> | <b>Total Cost</b> |
| • APN/05110: <i>EA-6 Series</i> | 12.634  | 27.734  | 30.062      | 0.000      | 30.062       | 18.600  | 14.099  | 10.068  | 10.285  | Continuing      | Continuing        |
| APN/05130: AEA Systems          | 29.601  | 77.365  | 49.999      | 0.000      | 49.999       | 48.878  | 59.692  | 43.688  | 41.870  | Continuing      | Continuing        |

### **D. Acquisition Strategy**

The Improved Capability (ICAP) III contract, an Engineering Manufacturing Development Cost Plus Incentive Fee/Award Fee basic contract with two Fixed Price Incentive production options, was awarded to a Northrop Grumman team in March 1998 following Milestone II after full and open competition. The contract was changed to a Cost Plus Award Fee contract in FY 1999. Low Rate Initial Production contract award was completed in FY 2003. A Milestone III Navy Program Decision Meeting was held on 23 September 2005. The Acquisition Decision Memorandum was signed by Assistant Secretary of the Navy for Research Development Acquisition on 21 November 2005. A Firm Fixed Price Full Rate Production (FRP) contract for Lot 2, 4 ALQ-218 systems, was awarded in March 2006. The FRP Lot 3 contract for 7 ALQ-218 systems was awarded 11 April 2008. The FRP Lot 4 contract for 9 ALQ-218 systems was awarded in August 2008.

#### **E. Performance Metrics**

- 1. Successful completion of ICAP III Block 4 development and testing.
- 2. Continued development of ICAP III Block 5 sufficient to conduct a successful development test.
- 3. Jammer Techniques Optimization development counters enemy radar systems and communication systems to provide techniques to protect allied forces.
- 4. AEAE continues risk reduction and system development.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604270N: Electronic Warfare (EW) Dev

PROJECT

0556: EW Counter Response

**DATE:** February 2012

| Product Development (          | oduct Development (\$ in Millions) |                                   |                              | FY 2   | 2012          | FY 2<br>Ba |               |      | 2013<br>CO    | FY 2013<br>Total |                     |            |                                |
|--------------------------------|------------------------------------|-----------------------------------|------------------------------|--------|---------------|------------|---------------|------|---------------|------------------|---------------------|------------|--------------------------------|
| Cost Category Item             | Contract<br>Method<br>& Type       | Performing<br>Activity & Location | Total Prior<br>Years<br>Cost | Cost   | Award<br>Date | Cost       | Award<br>Date | Cost | Award<br>Date | Cost             | Cost To<br>Complete | Total Cost | Target<br>Value of<br>Contract |
| Primary HDW Develop - ICAP     | C/FFP                              | Various:Various                   | 260.171                      | 0.533  | Dec 2011      | 0.500      | Dec 2012      | -    |               | 0.500            | Continuing          | Continuing | Continuing                     |
| Studies & Analysis (Non FFRDC) | C/FFP                              | Various:Various                   | 1.043                        | -      |               | -          |               | -    |               | -                | Continuing          | Continuing | Continuing                     |
| Systems Engineering NR         | WR                                 | Naval Research<br>Lab:Maryland    | 4.333                        | 0.446  | Dec 2011      | 0.409      | Dec 2012      | -    |               | 0.409            | Continuing          | Continuing | Continuing                     |
| Systems Engineering NAWCAD     | WR                                 | NAWCAD:Patuxent<br>River, MD      | 17.729                       | 2.294  | Nov 2011      | 2.443      | Nov 2012      | -    |               | 2.443            | Continuing          | Continuing | Continuing                     |
| Systems Eng/BLK Update         | WR                                 | NAWCWD:Point Mugu,<br>CA          | 53.770                       | 5.921  | Nov 2011      | 6.126      | Nov 2012      | -    |               | 6.126            | Continuing          | Continuing | Continuing                     |
| Systems Engineering NSWC       | WR                                 | NSWC Det:Crane, IN                | 8.258                        | 0.755  | Dec 2011      | 0.718      | Dec 2012      | -    |               | 0.718            | Continuing          | Continuing | Continuing                     |
| Systems Engineering VAR        | WR                                 | Various:Various                   | 12.775                       | 1.112  | Dec 2011      | 1.075      | Dec 2012      | -    |               | 1.075            | Continuing          | Continuing | Continuing                     |
|                                |                                    | Subtotal                          | 358.079                      | 11.061 |               | 11.271     |               | -    |               | 11.271           |                     |            |                                |

| Support (\$ in Millions)    |                              |                                   |                              | FY 2  | 2012          | FY 2<br>Ba | 2013<br>se    |      | 2013<br>CO    | FY 2013<br>Total |                     |            |                                |
|-----------------------------|------------------------------|-----------------------------------|------------------------------|-------|---------------|------------|---------------|------|---------------|------------------|---------------------|------------|--------------------------------|
| Cost Category Item          | Contract<br>Method<br>& Type | Performing<br>Activity & Location | Total Prior<br>Years<br>Cost | Cost  | Award<br>Date | Cost       | Award<br>Date | Cost | Award<br>Date | Cost             | Cost To<br>Complete | Total Cost | Target<br>Value of<br>Contract |
| Development Support - JATO  | SS/FP                        | Johns Hopkins<br>Unv:Maryland     | 20.642                       | 4.035 | Dec 2011      | 3.993      | Dec 2012      | -    |               | 3.993            | Continuing          | Continuing | Continuing                     |
| Eng & Tech Srvc (Non FFRDC) | Various                      | Various:Various                   | 8.672                        | 4.567 | Dec 2011      | 3.979      | Dec 2012      | -    |               | 3.979            | Continuing          | Continuing | Continuing                     |
| DFCS Installs               | Various                      | Various:Various                   | 0.559                        | -     |               | -          |               | -    |               | -                | Continuing          | Continuing | Continuing                     |
| ILS Pubs - ICAP III         | WR                           | FRC:Jacksonville, FL              | 1.273                        | 0.424 | Dec 2011      | 0.387      | Dec 2012      | -    |               | 0.387            | Continuing          | Continuing | Continuing                     |
|                             |                              | Subtotal                          | 31.146                       | 9.026 |               | 8.359      |               | -    |               | 8.359            |                     |            |                                |

PE 0604270N: Electronic Warfare (EW) Dev

Navy

UNCLASSIFIED
Page 8 of 38

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy

R-1 ITEM NOMENCLATURE

**DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY

PROJECT

1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)

PE 0604270N: Electronic Warfare (EW) Dev

0556: EW Counter Response

| Management Services (\$ in Millions) |                              |                                   | FY 2                         | 2012   | FY 2<br>Ba    | 2013<br>se |               | 2013<br>CO | FY 2013<br>Total |                  |                     |            |                                |
|--------------------------------------|------------------------------|-----------------------------------|------------------------------|--------|---------------|------------|---------------|------------|------------------|------------------|---------------------|------------|--------------------------------|
| Cost Category Item                   | Contract<br>Method<br>& Type | Performing<br>Activity & Location | Total Prior<br>Years<br>Cost | Cost   | Award<br>Date | Cost       | Award<br>Date | Cost       | Award<br>Date    | Cost             | Cost To<br>Complete | Total Cost | Target<br>Value of<br>Contract |
| Program Management<br>Support        | WR                           | Various:Various                   | 0.772                        | 0.135  | Dec 2011      | 0.098      | Dec 2012      | -          |                  | 0.098            | Continuing          | Continuing | Continuing                     |
|                                      |                              | Subtotal                          | 0.772                        | 0.135  |               | 0.098      |               | -          |                  | 0.098            |                     |            |                                |
| То                                   |                              |                                   | Total Prior<br>Years<br>Cost | FY 2   | 2012          | FY 2<br>Ba | 2013<br>se    |            | 2013<br>CO       | FY 2013<br>Total | Cost To<br>Complete | Total Cost | Target<br>Value of<br>Contract |
|                                      |                              | Project Cost Totals               | 389.997                      | 20.222 |               | 19.728     |               | -          |                  | 19.728           |                     |            |                                |

Remarks

PE 0604270N: Electronic Warfare (EW) Dev Navy

**UNCLASSIFIED** Page 9 of 38

| Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy    | DATE: February 2012                      |                           |  |  |  |  |  |
|--|--|---------------------------|--|--|--|--|--|
| APPROPRIATION/BUDGET ACTIVITY                        | R-1 ITEM NOMENCLATURE                    | PROJECT                   |  |  |  |  |  |
| 1319: Research, Development, Test & Evaluation, Navy | PE 0604270N: Electronic Warfare (EW) Dev | 0556: EW Counter Response |  |  |  |  |  |
| BA 5: Development & Demonstration (SDD)              |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |
|  |  |                           |  |  |  |  |  |

PE 0604270N: Electronic Warfare (EW) Dev Navy

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

1319: Research, Development, Test & Evaluation, Navy PE 0604270N: Electronic Warfare (EW) Dev 0556: EW Counter Response

BA 5: Development & Demonstration (SDD)

# Schedule Details

|  | St      | art  | End     |      |  |
|--|---------|------|---------|------|--|
| Events by Sub Project  | Quarter | Year | Quarter | Year |  |
| EW Counter Response  |         |      |         |      |  |
| Acquisition Milestones: Milestones: Fleet Release - ICAP III BLOCK 5 | 4       | 2012 | 4       | 2012 |  |
| Acquisition Milestones: Milestones: Fleet Release - ICAP III BLOCK 6 | 2       | 2014 | 2       | 2014 |  |
| Acquisition Milestones: Milestones: Fleet Release - ICAP III BLOCK 7 | 2       | 2015 | 2       | 2015 |  |
| Systems Development: Reviews: JATO Executive Steering Committee 2011 | 3       | 2011 | 3       | 2011 |  |
| Systems Development: Reviews: JATO Executive Steering Committee 2012 | 3       | 2012 | 3       | 2012 |  |
| Systems Development: Reviews: JATO Executive Steering Committee 2013 | 3       | 2013 | 3       | 2013 |  |
| Systems Development: Reviews: JATO Executive Steering Committee 2014 | 3       | 2014 | 3       | 2014 |  |
| Systems Development: Reviews: JATO Executive Steering Committee 2015 | 3       | 2015 | 3       | 2015 |  |
| Systems Development: Reviews: JATO Executive Steering Committee 2016 | 3       | 2016 | 3       | 2016 |  |
| Systems Development: Reviews: JATO Executive Steering Committee 2017 | 3       | 2017 | 3       | 2017 |  |
| Test & Evaluation: Operational Evaluation: ICAP III Block 6 DT/OT    | 1       | 2013 | 1       | 2014 |  |
| Test & Evaluation: Operational Evaluation: ICAP III Block 7 DT/OT    | 2       | 2014 | 1       | 2015 |  |
| Deliveries: ICAP III - Lot 4 FRP Deliveries (Qty 9)                  | 2       | 2011 | 1       | 2012 |  |

| Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy |  |                   | DATE: February 2012           |
|---|--|-------------------|-------------------------------|
| APPROPRIATION/BUDGET ACTIVITY                           | R-1 ITEM NOMENCLATURE                    | PROJECT           |                               |
| 1319: Research, Development, Test & Evaluation, Navy    | PE 0604270N: Electronic Warfare (EW) Dev | 1742: <i>EW</i> 7 | Fechnical Development and T&E |
| BA 5: Development & Demonstration (SDD)                 |  |                   |                               |

| COST (\$ in Millions)                  | FY 2011 | FY 2012 | FY 2013<br>Base | FY 2013<br>OCO | FY 2013<br>Total | FY 2014 | FY 2015 | FY 2016 | FY 2017 | Cost To<br>Complete | Total Cost |
|--|---------|---------|-----------------|----------------|------------------|---------|---------|---------|---------|---------------------|------------|
| 1742: EW Technical Development and T&E | 4.719   | 1.784   | 1.702           | -              | 1.702            | 1.649   | 1.552   | 1.542   | 1.568   | Continuing          | Continuing |
| Quantity of RDT&E Articles             | 0       | 0       | 0               | 0              | 0                | 0       | 0       | 0       | 0       |                     |            |

#### A. Mission Description and Budget Item Justification

Project Unit 1742 EW Technical Development and Test and Evaluation (T&E) funds efforts that focus on the quick reaction prototyping of tactical information and electronic warfare systems. This program directly addresses various fleet requirements across multiple platforms (airborne, surface and subsurface), airborne and surface crypotologic operational requirements documents and the joint oversight council missions needs statement to research, assess, and develop information warfare and electronic warfare systems and capabilities. These systems/capabilities provide information dominance to friendly forces during conflict, which is necessary for successful mission accomplishment.

| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)  |        | FY 2011 | FY 2012 | FY 2013 |
|---|--------|---------|---------|---------|
| Title: EW Technical Development and T&E   |        | 0.395   | -       | -       |
| Artic   | cles:  | 0       |         |         |
| FY 2011 Accomplishments:  |        |         |         |         |
| Completed airborne Information Warfare jammer development, test, and evaluation to include ancillary equipment, cabling, hardware, antennas and installation on prototype aircraft. |        |         |         |         |
| Title: EW Technical Development Studies & Analysis  |        | 2.633   | 1.584   | 1.500   |
| Artic   | icles: | 0       | 0       | 0       |
| FY 2011 Accomplishments:  |        |         |         |         |
| Continued studies and vulnerability analysis on emerging/changing threats/targets for EW programs.  |        |         |         |         |
| FY 2012 Plans:  |        |         |         |         |
| Continue studies and vulnerability analysis on emerging/changing threats/targets for EW programs.   |        |         |         |         |
| FY 2013 Plans:  |        |         |         |         |
| Continue studies and vulnerability analysis on emerging/changing threats/targets for EW programs.   |        |         |         |         |
| Title: EW Technical Development/Develop and Systems Integration   |        | 1.181   | -       | -       |
| Arti  | cles:  | 0       |         |         |
| FY 2011 Accomplishments:  |        |         |         |         |
| ·   | ,      |         | ı       |         |

PE 0604270N: Electronic Warfare (EW) Dev Navy UNCLASSIFIED
Page 12 of 38

| Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy   |  |                   | DATE: February 2012          |
|---|--|-------------------|------------------------------|
| APPROPRIATION/BUDGET ACTIVITY   | R-1 ITEM NOMENCLATURE                    | PROJECT           |                              |
| 1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD) | PE 0604270N: Electronic Warfare (EW) Dev | 1742: <i>EW</i> 7 | echnical Development and T&E |

| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)   | FY 2011 | FY 2012 | FY 2013 |
|--|---------|---------|---------|
| Completed development of EW capabilites in accordance with Fleet Forces Command and prioritized signals and networks that are first to be integrated into existing Maritime Cryptologic Systems for the 21st Century EW systems and deployed on air and surface platforms. |         |         |         |
| Title: EW Technical Development/Program Management   | 0.510   | 0.200   | 0.202   |
| Articles:  | 0       | 0       | 0       |
| FY 2011 Accomplishments: Continued funding necessary travel expenses and training to support the Research & Development projects.  |         |         |         |
| FY 2012 Plans: Continue funding necessary travel expenses and training to support the Research & Development projects.   |         |         |         |
| FY 2013 Plans: Continue funding necessary travel expenses and training to support the Research & Development projects.   |         |         |         |
| Accomplishments/Planned Programs Subtotals   | 4.719   | 1.784   | 1.702   |

# C. Other Program Funding Summary (\$ in Millions)

N/A

# D. Acquisition Strategy

The Navy Cyber Warfare Development Group (NCWDG) (formerly known as the Navy Information Operations Command (NIOC) Suitland) is granted streamlined acquisition authority for the development of classified prototypes and special capabilities under the DASN(C4I).

#### E. Performance Metrics

The NCWDG serves as the Program Management Office of the EW Technical Development and Information Warfare (IW) program. As such, NCWDG is tasked as the Navy's principal technical agent to research, assess, and develop EW/IW capabilities.

PE 0604270N: *Electronic Warfare (EW) Dev* Navy

UNCLASSIFIED
Page 13 of 38

**DATE:** February 2012 Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy APPROPRIATION/BUDGET ACTIVITY **R-1 ITEM NOMENCLATURE PROJECT** 1319: Research, Development, Test & Evaluation, Navy PE 0604270N: Electronic Warfare (EW) Dev 1742: EW Technical Development and T&E BA 5: Development & Demonstration (SDD) **FY 2013** FY 2013 FY 2013 **Product Development (\$ in Millions)** FY 2012 Base oco Total **Total Prior** Target Contract Method Performing **Years** Award Award Award Cost To Value of **Activity & Location Cost Category Item** Cost Date Cost Cost Date Complete **Total Cost** Contract & Type Cost Date Cost Primary Hardware C/CPFF Classified:Various 3.604 Continuing Continuing Continuing Development NAWC CL:China Lake, WR Aircraft Integration 1.600 Continuina Continuina Continuina CA Subtotal 5.204 FY 2013 FY 2013 FY 2013 Support (\$ in Millions) FY 2012 Base oco Total Contract **Total Prior Target** Method **Performing** Years Award Award Cost To Value of Award **Cost Category Item** & Type **Activity & Location** Cost Cost Date Cost Date Cost Date Cost Complete **Total Cost** Contract **Development Support** C/CPFF Oct 2011 Continuing Continuing Classified:Various 2.987 Continuing Software Development C/CPFF Classified:Various 3.944 Oct 2011 Continuina Continuing Continuing 1.584 1.500 Nov 2012 Studies & Analyses Various Classified:Various 7.974 Nov 2011 1.500 Continuing Continuing Continuing Subtotal 14.905 1.584 1.500 1.500 **FY 2013** FY 2013 FY 2013 Test and Evaluation (\$ in Millions) FY 2012 Base oco Total **Total Prior** Contract **Target** Years Award Cost To Method Performing Award Award Value of **Cost Category Item** & Type **Activity & Location** Cost Cost Date Cost Date Cost Date Cost Complete Total Cost Contract Developmental Test & WR NRL:Washington, DC 2.890 Continuing Continuing Continuing Evaluation Subtotal 2.890 FY 2013 FY 2013 FY 2013 Management Services (\$ in Millions) FY 2012 oco Base Total Contract **Total Prior** Target Method **Performing** Years Award Cost To Value of Award Award **Cost Category Item** & Type **Activity & Location** Cost Cost Date Cost Date Cost Date Cost Complete **Total Cost** Contract **Program Management** Various Classified:Various 0.905 0.085 Oct 2011 0.084 Oct 2012 0.084 Continuing Continuing Continuing NCWDG:Washington

PE 0604270N: Electronic Warfare (EW) Dev

WR

DC

Travel

Navy

UNCLASSIFIED Page 14 of 38

0.118

Oct 2012

Oct 2011

1.388

0.115

R-1 Line #101

0.118

Continuing

Continuing

Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604270N: Electronic Warfare (EW) Dev

PROJECT

1742: EW Technical Development and T&E

**DATE:** February 2012

| Management Services (             | anagement Services (\$ in Millions) |                                   |                              |       |               | FY 2<br>Ba |               |      | 2013<br>CO    | FY 2013<br>Total |                     |            |                                |
|-----------------------------------|-------------------------------------|-----------------------------------|------------------------------|-------|---------------|------------|---------------|------|---------------|------------------|---------------------|------------|--------------------------------|
| Cost Category Item                | Contract<br>Method<br>& Type        | Performing<br>Activity & Location | Total Prior<br>Years<br>Cost | Cost  | Award<br>Date | Cost       | Award<br>Date | Cost | Award<br>Date | Cost             | Cost To<br>Complete | Total Cost | Target<br>Value of<br>Contract |
| Acquisition Workforce Fund - 2009 | Various                             | Various:Various                   | 0.026                        | -     |               | -          |               | -    |               | -                | 0.000               | 0.026      |                                |
| Subtotal 2.319                    |                                     |                                   |                              | 0.200 |               | 0.202      |               | -    |               | 0.202            |                     |            |                                |

#### Remarks

Provides for official travel and training in direct support of Research & Development projects.

|                     | Total Prior<br>Years<br>Cost | FY 2  | 2012 | FY 2<br>Ba | FY 2 | FY 2013<br>Total | Cost To<br>Complete | Total Cost | Target<br>Value of<br>Contract |
|---------------------|------------------------------|-------|------|------------|------|------------------|---------------------|------------|--------------------------------|
| Project Cost Totals | 25.318                       | 1.784 |      | 1.702      | -    | 1.702            |                     |            |                                |

#### Remarks

PE 0604270N: *Electronic Warfare (EW) Dev* Navy

Page 15 of 38

| Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy    |  | DATE: February 2012                    |  |  |  |  |
|--|--|--|--|--|--|--|
| APPROPRIATION/BUDGET ACTIVITY                        | R-1 ITEM NOMENCLATURE                    | PROJECT                                |  |  |  |  |
| 1319: Research, Development, Test & Evaluation, Navy | PE 0604270N: Electronic Warfare (EW) Dev | 1742: EW Technical Development and T&E |  |  |  |  |
| BA 5: Development & Demonstration (SDD)              |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

PE 0604270N: Electronic Warfare (EW) Dev Navy

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

1319: Research, Development, Test & Evaluation, Navy PE 0604270N: Electronic Warfare (EW) Dev 1742: EW Technical Development and T&E

BA 5: Development & Demonstration (SDD)

# Schedule Details

|  | Sta     | art  | End     |      |  |
|--|---------|------|---------|------|--|
| Events by Sub Project  | Quarter | Year | Quarter | Year |  |
| Proj 1742  | ,       |      |         |      |  |
| ELECTRONIC WARFARE: Fixed Site Delivery: Electronic Warfare: Fixed Site Delivery: Fixed Site Delivery #3 | 4       | 2011 | 4       | 2011 |  |
| ELECTRONIC WARFARE: Countermeasure Test Date: Countermeasure Test Date: Countermeasure Delivery #3       | 4       | 2011 | 4       | 2011 |  |
| ELECTRONIC WARFARE: Test Support (NRL): Test Support (NRL)   | 3       | 2011 | 3       | 2011 |  |
| ELECTRONIC WARFARE: Vulnerability Analysis Discovery: Vulnerability Analysis Discovery                   | 1       | 2011 | 1       | 2011 |  |
| ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 2 2011   | 2       | 2011 | 2       | 2011 |  |
| ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 3 2011   | 3       | 2011 | 3       | 2011 |  |
| ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 4 2011   | 4       | 2011 | 4       | 2011 |  |
| ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 1 2012   | 1       | 2012 | 1       | 2012 |  |
| ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 2 2012   | 2       | 2012 | 2       | 2012 |  |
| ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 3 2012   | 3       | 2012 | 3       | 2012 |  |
| ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 4 2012   | 4       | 2012 | 4       | 2012 |  |
| ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 1 2013   | 1       | 2013 | 1       | 2013 |  |
| ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 2 2013   | 2       | 2013 | 2       | 2013 |  |
| ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 3 2013   | 3       | 2013 | 3       | 2013 |  |
| ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 4 2013   | 4       | 2013 | 4       | 2013 |  |
| ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 1 2014   | 1       | 2014 | 1       | 2014 |  |
| ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 2 2014   | 2       | 2014 | 2       | 2014 |  |
| ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 3 2014   | 3       | 2014 | 3       | 2014 |  |
| ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 4 2014   | 4       | 2014 | 4       | 2014 |  |

PE 0604270N: *Electronic Warfare (EW) Dev* Navy

UNCLASSIFIED
Page 17 of 38

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy

R-1 ITEM NOMENCLATURE

**DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY

PROJECT

1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)

PE 0604270N: Electronic Warfare (EW) Dev

1742: EW Technical Development and T&E

|  | Sta     | art  | End     |      |  |
|--|---------|------|---------|------|--|
| Events by Sub Project  | Quarter | Year | Quarter | Year |  |
| ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 1 2015 | 1       | 2015 | 1       | 2015 |  |
| ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 2 2015 | 2       | 2015 | 2       | 2015 |  |
| ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 3 2015 | 3       | 2015 | 3       | 2015 |  |
| ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 4 2015 | 4       | 2015 | 4       | 2015 |  |
| ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 1 2016 | 1       | 2016 | 1       | 2016 |  |
| ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 2 2016 | 2       | 2016 | 2       | 2016 |  |
| ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 3 2016 | 3       | 2016 | 3       | 2016 |  |
| ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 4 2016 | 4       | 2016 | 4       | 2016 |  |
| ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 1 2017 | 1       | 2017 | 1       | 2017 |  |
| ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 2 2017 | 2       | 2017 | 2       | 2017 |  |
| ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 3 2017 | 3       | 2017 | 3       | 2017 |  |
| ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 4 2017 | 4       | 2017 | 4       | 2017 |  |

DATE: February 2012

0

| LAIIIDIL IX-ZA, IXD I &L FIOJECT JU  | Suncation. Fi | J ZU IJ INAVY                   |                 |                |   |         |         |         | DATE: 1 ebidary 2012 |                     |            |  |
|--|---------------|---------------------------------|-----------------|----------------|---|---------|---------|---------|----------------------|---------------------|------------|--|
| APPROPRIATION/BUDGET ACT 1319: Research, Development, Te BA 5: Development & Demonstrati |               | IOMENCLA<br>0N: <i>Electron</i> |                 | EW) Dev        | PROJECT 2175: Tactical Air Electronic Warfare |         |         | )       |                      |                     |            |  |
| COST (\$ in Millions)  | FY 2011       | FY 2012                         | FY 2013<br>Base | FY 2013<br>OCO | FY 2013<br>Total                              | FY 2014 | FY 2015 | FY 2016 | FY 2017              | Cost To<br>Complete | Total Cost |  |
| 2175: Tactical Air Electronic<br>Warfare   | 49.353        | 62.100                          | 29.874          | -              | 29.874  | 14.408  | 13.897  | 2.711   | 2.848                | Continuing          | Continuing |  |

### A. Mission Description and Budget Item Justification

Quantity of RDT&E Articles

0

n

n

Exhibit R-24 PDT&F Project Justification: PR 2013 Navy

Integrated Defensive Electronic Countermeasures (IDECM) Block 3 (IB-3) introduced the new Fiber Optic Towed Decoy (FOTD) capability to the IDECM Block 2 Electronic Warfare (EW) Suite as a replacement for the ALE-50 decoy. The FOTD, when integrated with the rest of the F/A-18E/F EW suite (i.e., ALQ-214, ALR-67(V)3, ALE-47 and ALE-50), the associated cockpit controls, displays and other avionics significantly improves the survivability of the host aircraft in a Radio Frequency threat environment. Initial Operational Test & Evaluation found IB-3 effective, not suitable. Verification of Correction to Deficiencies completed in 2nd Qtr FY2011. An IB-3 MS III (Full Rate Production Decision) was approved in the 4th Qtr FY2011.

n

0

0

0

0

IDECM Block 4 (IB-4) is an Engineering Change Proposal (ECP) to the ALQ-214 to render it suitable for operation on F/A-18C/D aircraft (replacing the ALQ-126B and significantly improving F/A-18C/D survivability) while retaining all IDECM suite functionality when installed on F/A-18E/F aircraft. The IB-4 acquisition and contract strategy includes development of the Common On-Board-Jammer for the F/A-18 C/D/E/F aircraft through sole source contract awards for modifications to the ALQ-214. IB-4, ALQ-214 ECP, efforts include hardware and software design, development and test, delivery of 18 Engineering Development Models, integration and testing on the host aircraft. The F/A-18C/D EW Suite includes the ALR-67(V)2 Radar Warning Receiver (RWR), the ALE-47 Countermeasures Dispensing Set (CMDS), the mission computer and other avionics. In addition to performing the RWR function, the ALR-67(V)2 is the EW Bus Controller. The EW Bus is the primary interface between the EW Systems (Jammer, RWR, and CMDS). The mission computer is the Avionics Bus Controller, the interface between the EW suite and other avionics.

ALQ-214 Software Improvement will provide the ALQ-214 with Digital Radio Frequency Memory deny-delay, technique capability significantly improving F/A-18C/D/E/F survivability. Acquisition and contract strategy includes development, integration and test of the ALQ-214 software improvements through sole-source contract award. Minor modification to other avionics may be required in order to integrate this new capability. These other avionics may include, but are not limited to, the ALR-67(V)2, ALR-67(V)3, ALE-47, ALE-50, ALE-55, Mission Computer and Fire Control Radar.

| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)   | FY 2011 | FY 2012 | FY 2013 |
|--|---------|---------|---------|
| Title: Tactical Air EW   | 49.353  | 62.100  | 29.874  |
| Articles:  | 6       | 0       | 0       |
| FY 2011 Accomplishments: FY11 Base: The IDECM Block 4, ALQ-214 ECP engineering effort continued into FY11. In addition, engineering and logistics support with laboratory testing began in FY11. |         |         |         |
| FY 2012 Plans:   |         |         |         |

PE 0604270N: Electronic Warfare (EW) Dev

Navy

UNCLASSIFIED

Page 19 of 38 R-1 Line #101

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

1319: Research, Development, Test & Evaluation, Navy PE 0604270N: Electronic Warfare (EW) Dev 2175: Tactical Air Electronic Warfare

BA 5: Development & Demonstration (SDD)

| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)  | FY 2011 | FY 2012 | FY 2013 |
|---|---------|---------|---------|
| The Integrated Defensive Electronic Countermeasures (IDECM) Block 4, ALQ-214 Engineering Change Proposal (ECP) engineering effort will continue into FY12 and will include engineering and logistics support and flight testing. The ALQ-214 Software Improvement contract is planned for award to include development, integration and test of the ALQ-214 with Digital Radio Frequency Memory deny-delay, technique capability. |         |         |         |
| FY 2013 Plans: The IDECM Block 4, ALQ-214 ECP engineering effort will conclude in FY13. Flight testing for the ALQ-214 ECP will resume. The   |         |         |         |
| ALQ-214 Software Improvement contract will continue into FY13 and will include engineering and logistics support.   |         |         |         |
| Accomplishments/Planned Programs Subtotals  | 49.353  | 62.100  | 29.874  |

### C. Other Program Funding Summary (\$ in Millions)

|                             | •       | <b>-</b> | FY 2013 | FY 2013 | FY 2013      |         |         |         |         | Cost To    |                   |
|-----------------------------|---------|----------|---------|---------|--------------|---------|---------|---------|---------|------------|-------------------|
| Line Item                   | FY 2011 | FY 2012  | Base    | 000     | <u>Total</u> | FY 2014 | FY 2015 | FY 2016 | FY 2017 | Complete   | <b>Total Cost</b> |
| • APN/0576 1: <i>IDECM</i>  | 18.845  | 0.000    | 0.000   | 0.000   | 0.000        | 0.000   | 0.000   | 0.000   | 0.000   | 0.000      | 268.108           |
| APN/0576 2: Common On-Board | 0.000   | 40.272   | 57.067  | 0.000   | 57.067       | 84.305  | 102.388 | 133.449 | 51.569  | 156.382    | 625.432           |
| Jammer                      |         |          |         |         |              |         |         |         |         |            |                   |
| PANMC/0182: Airborne        | 19.041  | 20.248   | 20.931  | 0.000   | 20.931       | 21.508  | 22.210  | 22.575  | 22.996  | Continuing | Continuing        |
| Expendable CM               |         |          |         |         |              |         |         |         |         |            | -                 |

## **D. Acquisition Strategy**

IDECM Block 3 (IB-3) sole source award of Full Rate Production (FRP) in FY 2012. Annual IB-3 production contracts will continue through FY 2041. The ALQ-214 ECP contract effort was awarded sole source to ITT Electronic Systems in December 2009. The contract is planned to continue through FY 2013. ALQ-214 Software Improvement acquisition is planned via sole-source award to ITT in FY 2012. ITT is the original developer/manufacturer and current sustainer of the ALQ-214.

#### **E. Performance Metrics**

Navy

IDECM Block 3: Successfully award FRP 2-6 Contract in 3rd Qtr FY 2012.

IDECM Block 4: Successfully conduct In-Process Review 3 (Production Cut-In 1) in 1st Qtr FY 2012.

ALQ-214 Software Improvement: Successfully award a software development contract in 2nd Qtr FY 2012.

PE 0604270N: Electronic Warfare (EW) Dev

Page 20 of 38

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604270N: Electronic Warfare (EW) Dev

PROJECT

2175: Tactical Air Electronic Warfare

**DATE:** February 2012

| Product Development (\$ in Millions)    |                              |                                   | FY 2                         | FY 2013 FY 2013<br>2012 Base OCO |               |       |               | FY 2013<br>Total |               |       |                     |            |                                |
|---|------------------------------|-----------------------------------|------------------------------|----------------------------------|---------------|-------|---------------|------------------|---------------|-------|---------------------|------------|--------------------------------|
| Cost Category Item                      | Contract<br>Method<br>& Type | Performing<br>Activity & Location | Total Prior<br>Years<br>Cost | Cost                             | Award<br>Date | Cost  | Award<br>Date | Cost             | Award<br>Date | Cost  | Cost To<br>Complete | Total Cost | Target<br>Value of<br>Contract |
| Aircraft Integration-IDECM              | Various                      | Various:Various                   | 70.761                       | -                                |               | -     |               | -                |               | -     | 0.000               | 70.761     |                                |
| Aircraft Integration-IDECM Boeing       | SS/CPFF                      | Boeing:St. Louis, MO              | 7.269                        | 3.012                            | Mar 2012      | -     |               | -                |               | -     | 0.000               | 10.281     | 10.281                         |
| Primary Hdw Dev AAR-47<br>FY07 SUPP ATK | SS/CPFF                      | ATK Missile:Clearwater, FL        | 16.000                       | -                                |               | -     |               | -                |               | -     | 0.000               | 16.000     | 16.000                         |
| Primary Hdw Dev AAR-47<br>FY07 SUPP AFB | MIPR                         | AFB:Eglin, FL                     | 2.100                        | -                                |               | -     |               | -                |               | -     | 0.000               | 2.100      |                                |
| Primary Hdw Dev AAR-47<br>FY07 SUPP NVS | MIPR                         | NVS:Fort Belvoir, VA              | 0.064                        | -                                |               | -     |               | -                |               | -     | 0.000               | 0.064      |                                |
| Primary Hdw Dev - IDECM ITT             | SS/FFP                       | ITT:Clifton, NJ                   | 91.243                       | 19.068                           | Dec 2011      | -     |               | -                |               | -     | 0.000               | 110.311    | 110.311                        |
| Ship Suitability AAR-47                 | WR                           | NAWCAD:Pax River,<br>MD           | 0.050                        | -                                |               | -     |               | -                |               | -     | 0.000               | 0.050      |                                |
| Studies & Analysis DRFM (CONG)          | MIPR                         | NUWC:Keyport, WA                  | 0.018                        | -                                |               | -     |               | -                |               | -     | 0.000               | 0.018      |                                |
| Systems Eng - IDECM BAE                 | SS/CPFF                      | BAE Systems:Nashua,<br>NH         | 14.552                       | -                                |               | -     |               | -                |               | -     | 0.000               | 14.552     | 14.552                         |
| Systems Eng - IDECM                     | SS/CPFF                      | Various:Various                   | 62.783                       | 6.477                            | Mar 2012      | 5.186 | Mar 2013      | -                |               | 5.186 | Continuing          | Continuing | Continuing                     |
| Systems Eng - IDECM<br>Raytheon         | SS/CPFF                      | Raytheon:Goleta, CA               | 0.268                        | -                                |               | -     |               | -                |               | -     | 0.000               | 0.268      | 0.268                          |
| Risk Reduction DRFM (CONG)              | SS/CPFF                      | ITT:Clifton, NJ                   | 1.810                        | -                                |               | -     |               | -                |               | -     | 0.000               | 1.810      | 1.810                          |
| Risk Reduction IDECM ITT1               | SS/CPFF                      | ITT:Clifton, NJ                   | 2.495                        | -                                |               | -     |               | -                |               | -     | 0.000               | 2.495      | 2.495                          |
| Risk Reduction IDECM ITT2               | SS/FP                        | ITT:Clifton, NJ                   | 7.505                        | -                                |               | -     |               | -                |               | -     | 0.000               | 7.505      | 7.505                          |
| Risk Reduction ALQ-214 SW Imp           | SS/CPFF                      | ITT:Clifton, NJ                   | 3.427                        | -                                |               | -     |               | -                |               | -     | 0.000               | 3.427      | 3.427                          |
|   | -                            | Subtotal                          | 280.345                      | 28.557                           |               | 5.186 |               | -                |               | 5.186 |                     |            |                                |

PE 0604270N: Electronic Warfare (EW) Dev Navy UNCLASSIFIED
Page 21 of 38

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604270N: Electronic Warfare (EW) Dev

PROJECT

2175: Tactical Air Electronic Warfare

**DATE:** February 2012

| Support (\$ in Millions)        |                              |                                   | FY 2                         | 2012   |               | 2013<br>Ise | FY 2          | 2013<br>CO | FY 2013<br>Total |        |                     |            |                                |
|---------------------------------|------------------------------|-----------------------------------|------------------------------|--------|---------------|-------------|---------------|------------|------------------|--------|---------------------|------------|--------------------------------|
| Cost Category Item              | Contract<br>Method<br>& Type | Performing<br>Activity & Location | Total Prior<br>Years<br>Cost | Cost   | Award<br>Date | Cost        | Award<br>Date | Cost       | Award<br>Date    | Cost   | Cost To<br>Complete | Total Cost | Target<br>Value of<br>Contract |
| Dev/Eng Supt AAR-47 (Non-FFRDC) | WR                           | NRL:Washington, DC                | 0.343                        | -      |               | -           |               | -          |                  | -      | 0.000               | 0.343      |                                |
| Dev/Eng Supt AAR-47             | WR                           | Various:Various                   | 0.220                        | -      |               | -           |               | -          |                  | -      | 0.000               | 0.220      |                                |
| Software Dev - IDECM            | WR                           | Various:Various                   | 6.843                        | -      |               | -           |               | -          |                  | -      | 0.000               | 6.843      |                                |
| Integrated Log Supt AAR-47      | SS/CPFF                      | ATK Missile:Clearwater, FL        | 0.650                        | -      |               | -           |               | -          |                  | -      | 0.000               | 0.650      | 0.650                          |
| Software Dev AAR-47             | SS/CPFF                      | ATK Missile:Clearwater, FL        | 0.171                        | -      |               | -           |               | -          |                  | -      | 0.000               | 0.171      | 0.17                           |
| Integrated Log Supt - IDECM     | WR                           | FRC-SE:Jacksonville,<br>FL        | 0.413                        | 0.096  | Dec 2011      | -           |               | -          |                  | -      | 0.000               | 0.509      |                                |
| MSS - IDECM (Non-FFRDC)         | SS/CPFF                      | FRC-SE:Jacksonville,<br>FL        | 0.200                        | -      |               | -           |               | -          |                  | -      | 0.000               | 0.200      | 0.200                          |
| Software Dev-ALQ-214 SW<br>Dev  | SS/CPFF                      | ITT:Clifton, NJ                   | -                            | 11.452 | Feb 2012      | 7.485       | Dec 2012      | -          |                  | 7.485  | Continuing          | Continuing | Continuing                     |
| Software Dev-ALQ-214 SW<br>Dev  | SS/CPFF                      | Various:Various                   | -                            | 4.997  | Mar 2012      | 4.935       | Mar 2013      | -          |                  | 4.935  | Continuing          | Continuing | Continuing                     |
|                                 | •                            | Subtotal                          | 8.840                        | 16.545 |               | 12.420      |               | -          |                  | 12.420 |                     |            |                                |

| Test and Evaluation (\$ in Millions)   |                              |                                   |                              | FY 2  | 2012          | FY 2<br>Ba |               | FY 2013<br>OCO |               | FY 2013<br>Total |                     |            |                                |
|--|------------------------------|-----------------------------------|------------------------------|-------|---------------|------------|---------------|----------------|---------------|------------------|---------------------|------------|--------------------------------|
| Cost Category Item                     | Contract<br>Method<br>& Type | Performing<br>Activity & Location | Total Prior<br>Years<br>Cost | Cost  | Award<br>Date | Cost       | Award<br>Date | Cost           | Award<br>Date | Cost             | Cost To<br>Complete | Total Cost | Target<br>Value of<br>Contract |
| Dev Test & Eval Supt AAR-47            | WR                           | NRL:Washington, DC                | 0.270                        | -     |               | -          |               | -              |               | -                | 0.000               | 0.270      |                                |
| Dev Test & Eval Supt<br>ALQ-214 SW Imp | WR                           | Various:Various                   | -                            | 0.475 | Dec 2011      | 1.253      | Dec 2012      | -              |               | 1.253            | Continuing          | Continuing | Continuing                     |
| IDECM Test Supt<br>(OPTEVFOR)          | WR                           | Oper T&E for CD 30:VA             | 4.048                        | -     |               | -          |               | -              |               | -                | 0.000               | 4.048      |                                |
| IDECM Test Supt (Non-FFRDC)            | SS/CPFF                      | Various:Various                   | 1.486                        | -     |               | -          |               | -              |               | -                | 0.000               | 1.486      | 1.486                          |
| Live Fire Test & Eval AAR-47           | WR                           | NRL:Washington, DC                | 0.508                        | -     |               | -          |               | -              |               | -                | 0.000               | 0.508      |                                |

PE 0604270N: Electronic Warfare (EW) Dev

**UNCLASSIFIED** Page 22 of 38

R-1 Line #101

Navy

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604270N: Electronic Warfare (EW) Dev

PROJECT

2175: Tactical Air Electronic Warfare

**DATE:** February 2012

| Test and Evaluation (\$ in Millions)      |                              |                                   | FY 2                         | 2012   |               | 2013<br>ise |               | 2013<br>CO |               |       |                     |            |                                |
|---|------------------------------|-----------------------------------|------------------------------|--------|---------------|-------------|---------------|------------|---------------|-------|---------------------|------------|--------------------------------|
| Cost Category Item                        | Contract<br>Method<br>& Type | Performing<br>Activity & Location | Total Prior<br>Years<br>Cost | Cost   | Award<br>Date | Cost        | Award<br>Date | Cost       | Award<br>Date | Cost  | Cost To<br>Complete | Total Cost | Target<br>Value of<br>Contract |
| Operational Test & Eval<br>AAR-47         | WR                           | NRL:Washington, DC                | 0.100                        | -      |               | -           |               | -          |               | -     | 0.000               | 0.100      |                                |
| Oper Test & Eval ALQ-214<br>SW Imp        | WR                           | Various:Various                   | -                            | -      |               | -           |               | -          |               | -     | Continuing          | Continuing | Continuing                     |
| Studies & Analysis (Non-<br>FFRDC) (CONG) | SS/CPFF                      | John Hopkins<br>Un:Laurel, MD     | 0.774                        | -      |               | -           |               | -          |               | -     | 0.000               | 0.774      | 0.774                          |
| Flight Test - IDECM                       | WR                           | Various:Various                   | 1.278                        | 2.592  | Dec 2011      | 0.605       | Dec 2012      | -          |               | 0.605 | Continuing          | Continuing | Continuing                     |
| Flight Test- IDECM                        | WR                           | NAWCWD:China Lake,<br>CA          | -                            | 8.646  | Dec 2011      | 2.988       | Dec 2012      | -          |               | 2.988 | Continuing          | Continuing | Continuing                     |
|   |                              | Subtotal                          | 8.464                        | 11.713 |               | 4.846       |               | -          |               | 4.846 |                     |            |                                |

| Management Services (\$ in Millions)   |                              |                                   | FY 2                         | 2012  | FY 2<br>Ba    | 2013<br>se | FY 2013<br>OCO |      | FY 2013<br>Total |       |                     |            |                                |
|--|------------------------------|-----------------------------------|------------------------------|-------|---------------|------------|----------------|------|------------------|-------|---------------------|------------|--------------------------------|
| Cost Category Item                     | Contract<br>Method<br>& Type | Performing<br>Activity & Location | Total Prior<br>Years<br>Cost | Cost  | Award<br>Date | Cost       | Award<br>Date  | Cost | Award<br>Date    | Cost  | Cost To<br>Complete | Total Cost | Target<br>Value of<br>Contract |
| AAR-47 Travel                          | Allot                        | NAVAIR:Pax River, MD              | 0.050                        | -     |               | -          |                | -    |                  | -     | 0.000               | 0.050      |                                |
| Prog Mgmt DRFM                         | WR                           | NAWCAD:Pax River,<br>MD           | 0.002                        | -     |               | -          |                | -    |                  | -     | 0.000               | 0.002      |                                |
| PM Supt DRFM (Non-FFRDC)               | SS/CPFF                      | Amelex:California, MD             | 0.146                        | -     |               | -          |                | -    |                  | -     | 0.000               | 0.146      | 0.146                          |
| Prog Mgmt Supt DRFM (CONG)             | WR                           | NAWCAD:Pax River,<br>MD           | 0.234                        | -     |               | -          |                | -    |                  | -     | 0.000               | 0.234      |                                |
| Mgt & Prof Supt Srvc-IDECM (Non-FFRDC) | SS/CPFF                      | Amelex:California, MD             | 0.404                        | 0.571 | Dec 2011      | -          |                | -    |                  | -     | 0.000               | 0.975      | 0.975                          |
| Prog Mgmt Supt - IDECM                 | WR                           | Various:Various                   | 19.985                       | -     |               | -          |                | -    |                  | -     | Continuing          | Continuing | Continuing                     |
| Prog Mgmt Supt (Non-<br>FFRDC)         | SS/CPFF                      | DPA, Inc.:Arlington, VA           | 0.077                        | -     |               | -          |                | -    |                  | -     | 0.000               | 0.077      | 0.077                          |
| Travel - IDECM                         | Allot                        | Various:Various                   | 0.104                        | -     |               | -          |                | -    |                  | -     | 0.000               | 0.104      |                                |
| Travel - IDECM NAWCAD                  | Allot                        | NAWCAD:Pax River,<br>MD           | 0.224                        | -     |               | -          |                | -    |                  | -     | 0.000               | 0.224      |                                |
| Travel                                 | Allot                        | NAWCAD:Pax River,<br>MD           | 0.435                        | 0.185 | Oct 2011      | 0.150      | Oct 2012       | -    |                  | 0.150 | Continuing          | Continuing | Continuing                     |

PE 0604270N: Electronic Warfare (EW) Dev Navy UNCLASSIFIED
Page 23 of 38

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604270N: Electronic Warfare (EW) Dev

PROJECT

2175: Tactical Air Electronic Warfare

**DATE:** February 2012

| Management Services (\$ in Millions) |                              |                                   | FY 2                         | 2012  |               |       |               | FY 2013 FY 2013 CCO Total |               |       |                     |            |                                |
|--------------------------------------|------------------------------|-----------------------------------|------------------------------|-------|---------------|-------|---------------|---------------------------|---------------|-------|---------------------|------------|--------------------------------|
| Cost Category Item                   | Contract<br>Method<br>& Type | Performing<br>Activity & Location | Total Prior<br>Years<br>Cost | Cost  | Award<br>Date | Cost  | Award<br>Date | Cost                      | Award<br>Date | Cost  | Cost To<br>Complete | Total Cost | Target<br>Value of<br>Contract |
| Impact Fees                          | WR                           | NAWCAD:Pax River,<br>MD           | 0.032                        | -     |               | -     |               | -                         |               | -     | 0.000               | 0.032      |                                |
| Eng Supt - IDECM NAWCAD              | WR                           | NAWCWD:China Lake,<br>CA          | 9.547                        | -     |               | -     |               | -                         |               | -     | 0.000               | 9.547      |                                |
| Eng Supt - IDECM                     | WR                           | Various:Various                   | 32.505                       | -     |               | -     |               | -                         |               | -     | 0.000               | 32.505     |                                |
| Eng/Log Supt - DRFM<br>(CONG) VAR    | WR                           | Various:Various                   | 0.524                        | -     |               | -     |               | -                         |               | -     | 0.000               | 0.524      |                                |
| Eng/Log Supt - DRFM<br>(CONG) NAWCAD | WR                           | NAWCAD:Pax River,<br>MD           | 0.713                        | -     |               | -     |               | -                         |               | -     | 0.000               | 0.713      |                                |
| Eng/Log Supt - DRFM<br>(CONG) DTIC   | MIPR                         | DTIC:Fort Belvoir, VA             | 0.067                        | -     |               | -     |               | -                         |               | -     | 0.000               | 0.067      |                                |
| Eng/Log Supt - DRFM<br>NAWCAD        | WR                           | NAWCAD:Pax River,<br>MD           | 0.120                        | -     |               | -     |               | -                         |               | -     | 0.000               | 0.120      |                                |
| Eng/Log Supt - DRFM                  | WR                           | Various:Various                   | 0.420                        | -     |               | -     |               | -                         |               | -     | 0.000               | 0.420      |                                |
| Eng/Log Supt - IDECM<br>NAWCAD       | WR                           | NAWCAD:Pax River,<br>MD           | 2.136                        | 1.528 | Dec 2011      | 1.331 | Dec 2012      | -                         |               | 1.331 | Continuing          | Continuing | Continuing                     |
| Eng/Log Supt - IDECM                 | WR                           | Various:Various                   | 5.726                        | 2.252 | Dec 2011      | 5.108 | Dec 2012      | -                         |               | 5.108 | Continuing          | Continuing | Continuing                     |
| Eng/Log Supt - DRFM<br>(CONG) NRL    | WR                           | NRL:Washington, DC                | 0.375                        | -     |               | -     |               | -                         |               | -     | 0.000               | 0.375      |                                |
| Eng/Log Supt - DRFM<br>(CONG) FRCSE  | WR                           | FRC-SE:Jacksonville,<br>FL        | 0.050                        | -     |               | -     |               | -                         |               | -     | 0.000               | 0.050      |                                |
| Eng/Log Supt - IDECM<br>FRCSE        | WR                           | FRC-SE:Jacksonville,<br>FL        | 0.158                        | -     |               | -     |               | -                         |               | -     | 0.000               | 0.158      |                                |
| Eng & Tech Srvcs (Non-<br>FFRDC) L3  | SS/CPFF                      | L-3/Titan:California, MD          | 0.448                        | -     |               | -     |               | -                         |               | -     | 0.000               | 0.448      | 0.448                          |
| Eng & Tech Srvcs (Non-<br>FFRDC) NRL | SS/CPFF                      | NRL:Washington, DC                | 0.479                        | 0.250 | Dec 2011      | 0.258 | Dec 2012      | -                         |               | 0.258 | Continuing          | Continuing | Continuing                     |
| Eng & Tech Srvcs (Non-<br>FFRDC)     | SS/CPFF                      | COTF:Norfolk, VA                  | 0.534                        | 0.499 | Dec 2011      | 0.575 | Dec 2012      | -                         |               | 0.575 | Continuing          | Continuing | Continuing                     |
|                                      |                              | Subtotal                          | 75.495                       | 5.285 |               | 7.422 |               | -                         |               | 7.422 |                     |            |                                |

PE 0604270N: Electronic Warfare (EW) Dev Navy UNCLASSIFIED
Page 24 of 38

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 N  | lavy        |  |                                    |          |                          | DATE: Febru      | ary 2012    |        |
|--|-------------|--|------------------------------------|----------|--------------------------|------------------|-------------|--------|
| APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD) |             |  | MENCLATURE<br>: Electronic Warfare | (EW) Dev | PROJECT<br>2175: Taction | cal Air Electror | nic Warfare |        |
|  | Total Prior |  |                                    |          |                          |                  |             | Target |

|                     | Total Prior<br>Years<br>Cost | FY 20  |        | FY 2013<br>OCO | FY 2013<br>Total | Cost To<br>Complete | Total Cost | Target<br>Value of<br>Contract |
|---------------------|------------------------------|--------|--------|----------------|------------------|---------------------|------------|--------------------------------|
| Project Cost Totals | 373.144                      | 62.100 | 29.874 | -              | 29.874           |                     |            |                                |

Remarks

PE 0604270N: Electronic Warfare (EW) Dev

Navy Page 25 of 38

| Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy    | DATE: February 2012                      |                                       |
|--|--|---------------------------------------|
| APPROPRIATION/BUDGET ACTIVITY                        | R-1 ITEM NOMENCLATURE                    | PROJECT                               |
| 1319: Research, Development, Test & Evaluation, Navy | PE 0604270N: Electronic Warfare (EW) Dev | 2175: Tactical Air Electronic Warfare |
| BA 5: Development & Demonstration (SDD)              |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |

PE 0604270N: *Electronic Warfare (EW) Dev* Navy

UNCLASSIFIED
Page 26 of 38

| Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy    | DATE: February 2012                      |                                       |
|--|--|---------------------------------------|
| APPROPRIATION/BUDGET ACTIVITY                        | R-1 ITEM NOMENCLATURE                    | PROJECT                               |
| 1319: Research, Development, Test & Evaluation, Navy | PE 0604270N: Electronic Warfare (EW) Dev | 2175: Tactical Air Electronic Warfare |
| BA 5: Development & Demonstration (SDD)              |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |
|  |  |                                       |

PE 0604270N: *Electronic Warfare (EW) Dev* Navy

**UNCLASSIFIED** 

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

1319: Research, Development, Test & Evaluation, Navy

PE 0604270N: Electronic Warfare (EW) Dev

2175: Tactical Air Electronic Warfare

BA 5: Development & Demonstration (SDD)

# Schedule Details

|  | Sta     | art  | En      | d    |
|--|---------|------|---------|------|
| Events by Sub Project  | Quarter | Year | Quarter | Year |
| IDECM  | ,       |      |         |      |
| Acquisition Milestones: IDECM Block 3 Milestones: IDECM Block 3 Milestone III  | 4       | 2011 | 4       | 2011 |
| Acquisition Milestones: IDECM Block 3 Milestones: IDECM Block 3 Initial Operating Capability (IOC)                     | 4       | 2011 | 4       | 2011 |
| Acquisition Milestones: IDECM Block 4 Milestones: IDECM Block 4 IOC  | 3       | 2014 | 3       | 2014 |
| Acquisition Milestones: ALQ-214 SW Improvement: ALQ-214 SW Improvement (IOC)   | 4       | 2015 | 4       | 2015 |
| Acquisition Milestones: Program Reviews: IDECM Block 4 In-Process Review (IPR) 3                                       | 2       | 2012 | 2       | 2012 |
| Acquisition Milestones: Program Reviews: IDECM Block 4 In-Process Review (IPR) 4                                       | 2       | 2013 | 2       | 2013 |
| Acquisition Milestones: Program Reviews: IDECM Block 4 In-Process Review (IPR) 5                                       | 2       | 2014 | 2       | 2014 |
| Systems Development: IDECM Block 4 Development: IDECM Block 4 Development  | 1       | 2011 | 3       | 2014 |
| Systems Development: IDECM Block 4 Development: IDECM Block 4 EDM Deliveries (18)                                      | 2       | 2011 | 3       | 2012 |
| Systems Development: System Devlopment Reviews: ALQ-214 SW Improvement Development (PDR)                               | 3       | 2012 | 3       | 2012 |
| Systems Development: System Devlopment Reviews: ALQ-214 SW Improvement Development (CDR)                               | 1       | 2013 | 1       | 2013 |
| Systems Development: ALQ-214 SW Improvement Development: ALQ-214 SW Improvement (Contract Award)                       | 2       | 2012 | 2       | 2012 |
| Systems Development: ALQ-214 SW Improvement Development: ALQ-214 SW Improvement Development                            | 2       | 2012 | 1       | 2015 |
| Test and Evaluation: IDECM B-3 Verification of Correction of Deficiencies Testing: IDECM Block 3 VCD DT Flight Testing | 1       | 2011 | 1       | 2011 |
| Test and Evaluation: IDECM B-3 Verification of Correction of Deficiencies Testing: IDECM Block 3 VCD OT Flight Test    | 1       | 2011 | 2       | 2011 |

PE 0604270N: *Electronic Warfare (EW) Dev* Navy

Page 28 of 38

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy

R-1 ITEM NOMENCLATURE

**DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY

PROJECT

1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)

PE 0604270N: Electronic Warfare (EW) Dev

2175: Tactical Air Electronic Warfare

|  | St      | art  | End     |      |  |
|--|---------|------|---------|------|--|
| Events by Sub Project  | Quarter | Year | Quarter | Year |  |
| Test and Evaluation: IDECM Block 4 Testing: IDECM Block 4 Development Testing (DT)   | 1       | 2011 | 4       | 2013 |  |
| Test and Evaluation: IDECM Block 4 Testing: IDECM Block 4 Operational Assessment (OA)  | 1       | 2012 | 3       | 2012 |  |
| Test and Evaluation: IDECM Block 4 Testing: IDECM Block 4 Development Testing Flights  | 3       | 2012 | 1       | 2013 |  |
| Test and Evaluation: IDECM Block 4 Testing: IDECM Block 4 Operational Testing Flights  | 1       | 2013 | 4       | 2013 |  |
| Test and Evaluation: ALQ-214 SW Improvement Testing: ALQ-214 SW Improvement Development Testing (DT) Lab/Ground                      | 1       | 2013 | 4       | 2014 |  |
| Test and Evaluation: ALQ-214 SW Improvement Testing: ALQ-214 SW Improvement Development Testing(DT)/Operational Testing (OT) Flights | 2       | 2014 | 4       | 2014 |  |
| Test and Evaluation: ALQ-214 SW Improvement Testing: ALQ-214 SW Improvement Operational Testing (OT) Flights                         | 1       | 2015 | 3       | 2015 |  |
| Production Milestones: IDECM Block 2 Contract Awards: IDECM Block 2 Full Rate Production (FRP) 8                                     | 2       | 2011 | 2       | 2011 |  |
| Production Milestones: IDECM Block 3 Contract Awards: IDECM Block 3 Full Rate Production (FRP) 1                                     | 4       | 2011 | 4       | 2011 |  |
| Production Milestones: IDECM Block 3 Contract Awards: IDECM Block 3 Full Rate Production (FRP) 2                                     | 3       | 2012 | 3       | 2012 |  |
| Production Milestones: IDECM Block 3 Contract Awards: IDECM Block 3 Full Rate Production (FRP) 3                                     | 2       | 2013 | 2       | 2013 |  |
| Production Milestones: IDECM Block 3 Contract Awards: IDECM Block 3 Full Rate Production (FRP) 4                                     | 2       | 2014 | 2       | 2014 |  |
| Production Milestones: IDECM Block 3 Contract Awards: IDECM Block 3 Full Rate Production (FRP) 5                                     | 2       | 2015 | 2       | 2015 |  |
| Production Milestones: IDECM Block 3 Contract Awards: IDECM Block 3 Full Rate Production (FRP) 6                                     | 2       | 2016 | 2       | 2016 |  |

PE 0604270N: Electronic Warfare (EW) Dev Navy

**UNCLASSIFIED** Page 29 of 38

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604270N: Electronic Warfare (EW) Dev

PROJECT

2175: Tactical Air Electronic Warfare

**DATE:** February 2012

|   | Sta     | art  | En      | d    |
|---|---------|------|---------|------|
| Events by Sub Project   | Quarter | Year | Quarter | Year |
| Production Milestones: IDECM Block 4 Contract Awards: IDECM Block 4 Full Rate Production (FRP) 9  | 2       | 2012 | 2       | 2012 |
| Production Milestones: IDECM Block 4 Contract Awards: IDECM Block 4 Full Rate Production (FRP) 10 | 2       | 2013 | 2       | 2013 |
| Production Milestones: IDECM Block 4 Contract Awards: IDECM Block 4 Full Rate Production (FRP) 11 | 2       | 2014 | 2       | 2014 |
| Production Milestones: IDECM Block 4 Contract Awards: IDECM Block 4 Full Rate Production (FRP) 12 | 2       | 2015 | 2       | 2015 |
| Production Milestones: IDECM Block 4 Contract Awards: IDECM Block 4 Full Rate Production (FRP) 13 | 2       | 2016 | 2       | 2016 |
| Production Milestones: IDECM Block 4 Contract Awards: IDECM Block 4 Full Rate Production (FRP) 14 | 2       | 2017 | 2       | 2017 |
| Deliveries: IDECM Block 2: IDECM Block 2 FRP 5 Deliveries (17)                                    | 1       | 2011 | 2       | 2011 |
| Deliveries: IDECM Block 2: IDECM Block 2 FRP 6 Deliveries (10)                                    | 2       | 2011 | 2       | 2012 |
| Deliveries: IDECM Block 2: IDECM Block 2 FRP 7 Deliveries (10)                                    | 2       | 2012 | 2       | 2013 |
| Deliveries: IDECM Block 2: IDECM Block 2 FRP 8 Deliveries (3)                                     | 2       | 2013 | 2       | 2014 |
| Deliveries: IDECM Block 3: IDECM Block 3 LRIP 4 Deliveries (150)                                  | 1       | 2011 | 1       | 2011 |
| Deliveries: IDECM Block 3: IDECM Block 3 LRIP 5 Deliveries (251)                                  | 1       | 2011 | 4       | 2011 |
| Deliveries: IDECM Block 3: IDECM Block 3 LRIP 6 Deliveries (334)                                  | 4       | 2011 | 4       | 2012 |
| Deliveries: IDECM Block 3: IDECM Block 3 FRP 1 Deliveries (276)                                   | 4       | 2012 | 4       | 2013 |
| Deliveries: IDECM Block 3: IDECM Block 3 FRP 2 Deliveries (292)                                   | 3       | 2013 | 3       | 2014 |
| Deliveries: IDECM Block 3: IDECM Block 3 FRP 3 Deliveries (324)                                   | 3       | 2014 | 3       | 2015 |
| Deliveries: IDECM Block 3: IDECM Block 3 FRP 4 Deliveries (336)                                   | 3       | 2015 | 3       | 2016 |
| Deliveries: IDECM Block 3: IDECM Block 3 FRP 5 Deliveries (348)                                   | 3       | 2016 | 3       | 2017 |
| Deliveries: IDECM Block 3: IDECM Block 3 FRP 6 Deliveries (354)                                   | 3       | 2017 | 4       | 2017 |
| Deliveries: IDECM Block 4: IDECM Block 4 FRP 9 Deliveries (7)                                     | 2       | 2014 | 2       | 2015 |
| Deliveries: IDECM Block 4: IDECM Block 4 FRP 10 Deliveries (17)                                   | 2       | 2015 | 2       | 2016 |

PE 0604270N: Electronic Warfare (EW) Dev

**UNCLASSIFIED** Page 30 of 38

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy

R-1 ITEM NOMENCLATURE

**DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY

PROJECT

1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)

PE 0604270N: Electronic Warfare (EW) Dev

2175: Tactical Air Electronic Warfare

|   | St      | art  | End     |      |  |
|---|---------|------|---------|------|--|
| Events by Sub Project   | Quarter | Year | Quarter | Year |  |
| Deliveries: IDECM Block 4: IDECM Block 4 FRP 11 Deliveries (30) | 2       | 2016 | 2       | 2017 |  |
| Deliveries: IDECM Block 4: IDECM Block 4 FRP 12 Deliveries (41) | 2       | 2017 | 4       | 2017 |  |

**UNCLASSIFIED** Page 31 of 38

**DATE:** February 2012

0

| ,                                      |         | ,       |                 |                                |                  |         |         |   |         |                     |            |
|--|---------|---------|-----------------|--------------------------------|------------------|---------|---------|---|---------|---------------------|------------|
|  |         |         |                 | <b>R-1 ITEM N</b><br>PE 060427 |                  |         | EW) Dev | PROJECT 3327: MAGTF EW Aviation Development |         |                     |            |
| COST (\$ in Millions)                  | FY 2011 | FY 2012 | FY 2013<br>Base | FY 2013<br>OCO                 | FY 2013<br>Total | FY 2014 | FY 2015 | FY 2016                                     | FY 2017 | Cost To<br>Complete | Total Cost |
| 3327: MAGTF EW Aviation<br>Development | -       | 10.912  | -               | -                              | -                | -       | -       | -   | -       | 0.000               | 10.912     |

0

0

0

R-1 Line #101

0

# A. Mission Description and Budget Item Justification

Quantity of RDT&E Articles

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy

This project unit supports the United States Marine Corps (USMC) development of Marine Air Ground Task Force (MAGTF) Electronic Warfare (EW) and the various elements of its distributed System of Systems that support the Commandant of the Marine Corps' Strategy and Vision 2025 and Joint Vision 2025. The SoS will address MAGTF EW sufficiency gaps in the areas of Electronic Attack, Electronic Warfare Support, and Electronic Protection with a multitude of payloads designed for carriage on a variety of organic MAGTF air and ground assets. Payload development plans follow an adaptable, modular and open architecture philosophy to combat the increasing capability gap and enable future growth at a reduced operational and sustainment cost.

0

Prior to FY12, Intrepid Tiger II efforts were budgeted under PU 0556.

0

n

n

| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)   | FY 2011 | FY 2012 | FY 2013 |
|--|---------|---------|---------|
| Title: MAGTF EW Software Reprogrammable Payload (SRP)  | -       | 5.312   | -       |
| Articles:  |         | 0       |         |
| FY 2012 Plans:   |         |         |         |
| Transition SRP and associated components; Collaborative EW/EW Battle Management, EW Services Architecture (formerly Collaborative On-line Reconnaissance Operationally Responsive Attack Link), and Intrepid Tiger II(v)2 from the Joint Capabilities Technology Demonstration into a viable capability. |         |         |         |
| Title: Intrepid Tiger II (v)1 (ALQ-231)  | -       | 5.600   | -       |
| Articles:  |         | 0       |         |
| FY 2012 Plans:   |         |         |         |
| OCO:   |         |         |         |
| This project develops integration between Intrepid Tiger II(v)1 (ALQ-231) and USMC platforms including F/A-18, AV-8B, and the  |         |         |         |
| UAS. Initiation of incremental capability improvements and maintenance of threat effectiveness to Area of Regard defined threat  |         |         |         |
| sets employs fleet operator and networked utility assessment inputs. Production of 25 Intrepid Tiger II(v)1 (ALQ-231) Engineering  |         |         |         |
| Development Models. The project fully establishes initial supportability and maintenance concepts.   |         |         |         |
| Accomplishments/Planned Programs Subtotals   | -       | 10.912  | -       |

PE 0604270N: Electronic Warfare (EW) Dev

Navy

**UNCLASSIFIED** 

Page 32 of 38

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

1319: Research, Development, Test & Evaluation, Navy PE 0604270N: Electronic Warfare (EW) Dev 3327: MAGTF EW Aviation Development

BA 5: Development & Demonstration (SDD)

## C. Other Program Funding Summary (\$ in Millions)

|                        |         | -       | FY 2013 | FY 2013 | FY 2013      |         |         |         |         | <b>Cost To</b>  |                   |
|------------------------|---------|---------|---------|---------|--------------|---------|---------|---------|---------|-----------------|-------------------|
| <u>Line Item</u>       | FY 2011 | FY 2012 | Base    | OCO     | <u>Total</u> | FY 2014 | FY 2015 | FY 2016 | FY 2017 | <b>Complete</b> | <b>Total Cost</b> |
| APN/0587: MAGTF EW for | 2.600   | 0.489   | 34.127  | 0.000   | 34.127       | 14.446  | 20.507  | 8.006   | 6.095   | Continuing      | Continuing        |

Aviation

#### D. Acquisition Strategy

This project unit is part of USMC led efforts to ensure Marine Corps requirements are included in the budget process for the FYDP and beyond. These efforts include Software Reprogrammable Payload, Intrepid Tiger II(v)1 (ALQ-231), Intrepid Tiger II(v)2, Collaborative EW (Electronic Warfare)/EW Battle Management, EW Payload, and EW Service Architecture (formerly Collaborative On-line Reconnaissance Operationally Responsive Attack Link). These programs are the Marine Corps' initial steps to create systems to distribute EW capability across the battle space with the intent of replacing EA-6B capabilities for the Marine Air Ground Task Force by 2019.

#### E. Performance Metrics

Successful completion of Intrepid Tiger II(v)1 (ALQ-231) Engineering Development Model (EDM) Lot 1 Developmental Testing/Operational Testing. Delivery of final EDM test articles prior to Full Operational Capability.

PE 0604270N: Electronic Warfare (EW) Dev

Navy

Page 33 of 38

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604270N: Electronic Warfare (EW) Dev

PROJECT

3327: MAGTF EW Aviation Development

**DATE:** February 2012

| Product Development | (\$ in Millio                | ns)                                  |                              | FY 2012 |               | FY 2013<br>Base |               | FY 2013<br>OCO |               | FY 2013<br>Total |                     |            |                                |
|---------------------|------------------------------|--------------------------------------|------------------------------|---------|---------------|-----------------|---------------|----------------|---------------|------------------|---------------------|------------|--------------------------------|
| Cost Category Item  | Contract<br>Method<br>& Type | Performing<br>Activity & Location    | Total Prior<br>Years<br>Cost | Cost    | Award<br>Date | Cost            | Award<br>Date | Cost           | Award<br>Date | Cost             | Cost To<br>Complete | Total Cost | Target<br>Value of<br>Contract |
| Systems Engineering | WR                           | NAWC AD:Patuxent<br>River, MD        | -                            | 0.200   | Nov 2011      | -               |               | -              |               | -                | 0.000               | 0.200      |                                |
| Systems Engineering | WR                           | NSWC:Various                         | -                            | 0.200   | Nov 2011      | -               |               | -              |               | -                | 0.000               | 0.200      |                                |
| Systems Engineering | WR                           | Naval Research<br>Lab:Washington, DC | -                            | 5.312   | Dec 2011      | -               |               | -              |               | -                | 0.000               | 5.312      |                                |
| Systems Engineering | WR                           | NAWC WD:Pt. Mugu,<br>CA              | -                            | 1.460   | Nov 2011      | -               |               | -              |               | -                | 0.000               | 1.460      |                                |
|                     | •                            | Subtotal                             | -                            | 7.172   |               | -               |               | -              |               | -                | 0.000               | 7.172      |                                |

#### Remarks

Beginning in FY13, this program will be funded under Program Element 0604376M, Project Unit 3327.

| Support (\$ in Millions)        |                              | ort (\$ in Millions)              |                              | FY 2  | 2012          | FY 2<br>Ba | 2013<br>ise   |      | 2013<br>CO    | FY 2013<br>Total |                     |            |                                |
|---------------------------------|------------------------------|-----------------------------------|------------------------------|-------|---------------|------------|---------------|------|---------------|------------------|---------------------|------------|--------------------------------|
| Cost Category Item              | Contract<br>Method<br>& Type | Performing<br>Activity & Location | Total Prior<br>Years<br>Cost | Cost  | Award<br>Date | Cost       | Award<br>Date | Cost | Award<br>Date | Cost             | Cost To<br>Complete | Total Cost | Target<br>Value of<br>Contract |
| Eng & Tech Srvc (Non-<br>FFRDC) | Various                      | Various:Various                   | -                            | 1.440 | Nov 2011      | -          |               | -    |               | -                | 0.000               | 1.440      | 1.440                          |
|                                 |                              | Subtotal                          | -                            | 1.440 |               | -          |               | -    |               | -                | 0.000               | 1.440      | 1.440                          |

#### **Remarks**

Beginning in FY13, this program will be funded under Program Element 0604376M, Project Unit 3327.

| Test and Evaluation (\$ | Test and Evaluation (\$ in Millions) |                                   |                              |       | FY 2012       |      | FY 2013<br>Base |      | FY 2013<br>OCO |      |                     |            |                                |
|-------------------------|--------------------------------------|-----------------------------------|------------------------------|-------|---------------|------|-----------------|------|----------------|------|---------------------|------------|--------------------------------|
| Cost Category Item      | Contract<br>Method<br>& Type         | Performing<br>Activity & Location | Total Prior<br>Years<br>Cost | Cost  | Award<br>Date | Cost | Award<br>Date   | Cost | Award<br>Date  | Cost | Cost To<br>Complete | Total Cost | Target<br>Value of<br>Contract |
| Testing                 | WR                                   | NAWCAD:Patuxent<br>River, MD      | -                            | 1.600 | Nov 2011      | -    |                 | -    |                | -    | 0.000               | 1.600      |                                |
| Flight Testing          | WR                                   | NAWCWD:China Lake,<br>CA          | -                            | 0.700 | Nov 2011      | -    |                 | -    |                | -    | 0.000               | 0.700      |                                |
|                         | Subtotal -                           |                                   |                              | 2.300 |               | -    |                 | -    |                | -    | 0.000               | 2.300      |                                |

PE 0604270N: Electronic Warfare (EW) Dev

UNCLASSIFIED
Page 34 of 38

R-1 Line #101

Navy

| y |
|---|
|   |

R-1 ITEM NOMENCLATURE

**DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy

PROJECT

BA 5: Development & Demonstration (SDD)

PE 0604270N: Electronic Warfare (EW) Dev

3327: MAGTF EW Aviation Development

| Test and Evaluation (\$ in Million        | s)                                |                              | FY : | 2012          |      | 2013<br>ase   |      | 2013<br>CO    | FY 2013<br>Total |                     |            |                                |
|---|-----------------------------------|------------------------------|------|---------------|------|---------------|------|---------------|------------------|---------------------|------------|--------------------------------|
| Contract Method Cost Category Item & Type | Performing<br>Activity & Location | Total Prior<br>Years<br>Cost | Cost | Award<br>Date | Cost | Award<br>Date | Cost | Award<br>Date | Cost             | Cost To<br>Complete | Total Cost | Target<br>Value of<br>Contract |

#### Remarks

Beginning in FY13, this program will be funded under Program Element 0604376M, Project Unit 3327.

|                     | Total Prior<br>Years<br>Cost | FY 2   | 012 |   | 2013<br>ise |   | 2013<br>CO | FY 2013<br>Total | Cost To<br>Complete | Total Cost | Target<br>Value of<br>Contract |
|---------------------|------------------------------|--------|-----|---|-------------|---|------------|------------------|---------------------|------------|--------------------------------|
| Project Cost Totals | -                            | 10.912 |     | - |             | - |            | -                | 0.000               | 10.912     |                                |

#### Remarks

PE 0604270N: Electronic Warfare (EW) Dev Navy

Page 35 of 38

| Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy  |  | DATE: February 2012                 |  |  |  |  |
|--|--|-------------------------------------|--|--|--|--|
| APPROPRIATION/BUDGET ACTIVITY  | R-1 ITEM NOMENCLATURE                    | PROJECT                             |  |  |  |  |
| 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD) | PE 0604270N: Electronic Warfare (EW) Dev | 3327: MAGTF EW Aviation Development |  |  |  |  |
| DA 3. Development & Demonstration (3DD)  |  |                                     |  |  |  |  |
|  |  |                                     |  |  |  |  |
|  |  |                                     |  |  |  |  |
|  |  |                                     |  |  |  |  |
|  |  |                                     |  |  |  |  |
|  |  |                                     |  |  |  |  |
|  |  |                                     |  |  |  |  |
|  |  |                                     |  |  |  |  |
|  |  |                                     |  |  |  |  |
|  |  |                                     |  |  |  |  |
|  |  |                                     |  |  |  |  |
|  |  |                                     |  |  |  |  |
|  |  |                                     |  |  |  |  |
|  |  |                                     |  |  |  |  |
|  |  |                                     |  |  |  |  |
|  |  |                                     |  |  |  |  |
|  |  |                                     |  |  |  |  |
|  |  |                                     |  |  |  |  |
|  |  |                                     |  |  |  |  |
|  |  |                                     |  |  |  |  |
|  |  |                                     |  |  |  |  |
|  |  |                                     |  |  |  |  |
|  |  |                                     |  |  |  |  |
|  |  |                                     |  |  |  |  |
|  |  |                                     |  |  |  |  |
|  |  |                                     |  |  |  |  |

PE 0604270N: *Electronic Warfare (EW) Dev* Navy

UNCLASSIFIED
Page 36 of 38

| Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy                                  |  | DATE: February 2012                         |  |  |  |
|--|--|---|--|--|--|
| APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy | R-1 ITEM NOMENCLATURE PE 0604270N: Electronic Warfare (EW) Dev | PROJECT 3327: MAGTF EW Aviation Development |  |  |  |
| BA 5: Development & Demonstration (SDD)  | 1 2 000 12 rott. Zieotrome Wanare (211) Bev                    | oozii. Wiiterii Zivittiaaan Bavalepinant    |  |  |  |
|  |  |   |  |  |  |
|  |  |   |  |  |  |
|  |  |   |  |  |  |
|  |  |   |  |  |  |
|  |  |   |  |  |  |
|  |  |   |  |  |  |
|  |  |   |  |  |  |
|  |  |   |  |  |  |
|  |  |   |  |  |  |
|  |  |   |  |  |  |
|  |  |   |  |  |  |
|  |  |   |  |  |  |
|  |  |   |  |  |  |
|  |  |   |  |  |  |
|  |  |   |  |  |  |
|  |  |   |  |  |  |
|  |  |   |  |  |  |
|  |  |   |  |  |  |
|  |  |   |  |  |  |
|  |  |   |  |  |  |
|  |  |   |  |  |  |
|  |  |   |  |  |  |
|  |  |   |  |  |  |
|  |  |   |  |  |  |

PE 0604270N: *Electronic Warfare (EW) Dev* Navy

**UNCLASSIFIED** 

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy

DATE: February 2012

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

1319: Research, Development, Test & Evaluation, Navy PE 0604270N: Electronic Warfare (EW) Dev 3327: MAGTF EW Aviation Development

BA 5: Development & Demonstration (SDD)

# Schedule Details

|   | St      | art  | End     |      |
|---|---------|------|---------|------|
| Events by Sub Project   | Quarter | Year | Quarter | Year |
| Software Reprogrammable Payload   |         | -    |         |      |
| Test & Evaluation: Technical Evaluation: Joint Capability Technology Demonstration (JCTD) | 1       | 2011 | 4       | 2012 |
| Test & Evaluation: Operational Evaluation: Operational Assessment (OA)                    | 2       | 2011 | 2       | 2011 |
| Intrepid Tiger II (ALQ-231)   |         |      |         |      |
| Acquisition Milestones: Milestones: Early Operational Capability (EOC)                    | 1       | 2012 | 1       | 2012 |
| Acquisition Milestones: Milestones: IOC   | 3       | 2012 | 3       | 2012 |
| Test & Evaluation: Operational Evaluation: Quick Reaction Assessment (QRA)                | 3       | 2011 | 4       | 2011 |
| Deliveries: Engineering Development Model (EDM) Lot 1 Deliveries (Qty 10)                 | 3       | 2011 | 4       | 2011 |
| Deliveries: EDM Lot 2 Deliveries (Qty 25)   | 2       | 2012 | 4       | 2012 |